

What is claimed is:

1. A spinal disc space distractor, comprising:  
a body positionable in a spinal disc space between adjacent vertebrae, said  
body having a distal end surface, a proximal end and a central axis extending  
5 therebetween, said body including:  
a lateral surface extending generally in the direction of said central  
axis;  
a medial surface opposite said lateral surface and extending generally  
in the direction of said central axis;  
10 an upper surface extending generally in the direction of said central  
axis;  
a lower surface opposite said upper surface and extending generally in  
the direction of said central axis;  
a first transition surface extending between said distal end surface and  
15 said lateral surface, said first transition surface having a first curvature  
generally corresponding to the curvature of the inner portion of the cortical rim  
of the vertebral endplates in the axial plane;  
a second upper transition surface extending between said lateral surface  
and said upper surface and a second lower transition surface extending  
20 between said lateral surface and said lower surface, said second upper and  
lower transition surfaces each having a second curvature generally  
corresponding to the curvature of the inner portion of the cortical rim of the  
vertebral endplates in the coronal plane; and  
a third upper transition surface extending between said distal end  
25 surface and said upper surface and a third lower transition surface extending  
between said distal end surface and said lower surface, said third upper and  
lower transition surfaces each having a third curvature generally corresponding  
to the curvature of the inner portion of the cortical rim of the vertebral  
endplates in the sagittal plane.

2. The distractor of claim 1, wherein said third upper transition surface extends between said first transition surface and said upper surface and said third lower transition surface extends between said first transition surface and said lower surface.

3. The distractor of claim 1, wherein said upper and lower surfaces each include a plurality of teeth formed therein.

4. The distractor of claim 1, wherein said upper surface includes a proximal portion and a distal portion and said lower surface includes a proximal portion and a distal portion, said proximal portions being generally parallel with one another and said distal portions tapering toward one another from said proximal portions toward said distal end surface.

5. The distractor of claim 1, wherein the distractor includes a proximal end wall adjacent said proximal end and said body extends distally from said proximal end wall.

6. The distractor of claim 5, wherein said proximal end wall includes an inner surface extending above said upper surface and an inner surface extending below said lower surface, said inner surfaces contacting adjacent vertebrae to limit insertion depth of said body in the spinal disc space.

7. The distractor of claim 5, wherein said proximal end wall and said body include a bore extending distally therein from said proximal end wall.

8. The distractor of claim 7, further comprising a shaft attachable to said bore.

9. The distractor of claim 1, wherein said body is made from radiolucent material and said body further includes at least one radiographic marker.

10. The distractor of claim 1, wherein said distal end surface is linear and  
5 orthogonal to said central axis.

11. The distractor of claim 1, wherein said lateral surface includes a central linear region extending parallel to the central axis, said second upper and lower transition surfaces extending between said central region and said upper surface and  
10 said lower surface, respectively.

12. A spinal disc space distractor, comprising:  
a body positionable in a spinal disc space between adjacent vertebrae, said body having a central axis extending therethrough, said body including:  
15 a distal end surface;  
a lateral surface extending generally in the direction of said central axis;  
a medial surface opposite said lateral surface and extending generally in the direction of said central axis;  
20 an upper surface extending generally in the direction of said central axis;  
a lower surface opposite said upper surface and extending generally in the direction of said central axis; and  
at least a first transition surface extending between said distal end  
25 surface and said lateral surface, said first transition surface having a first curvature generally corresponding to the curvature of the inner portion of the cortical rim of the vertebral endplates in the axial plane.

13. The distractor of claim 12, wherein said body further includes a second upper transition surface extending between said lateral surface and said upper surface and a second lower transition surface extending between said lateral surface and said lower surface, said second upper and lower transition surfaces each having a second curvature generally corresponding to the curvature of the inner portion of the cortical rim of the vertebral endplates in the coronal plane.

14. The distractor of claim 13, wherein said lateral surface includes a central linear region extending parallel to the central axis, said second upper and lower transition surfaces extending between said central region and said upper surface and said lower surface, respectively.

15. The distractor of claim 13, wherein said first curvature is defined by a radius of curvature of 9 millimeters and said second curvature is defined by a radius of curvature of 8 millimeters.

16. The distractor of claim 13, a third upper transition surface extending between said distal end surface and said upper surface and a third lower transition surface extending between said distal end surface and said lower surface, said third upper and lower transition surfaces each having a third curvature generally corresponding to the curvature of the inner portion of the cortical rim of the vertebral endplates in the sagittal plane.

17. The distractor of claim 16, wherein said third upper transition surface extends between said first transition surface and said upper surface and said third lower transition surface extends between said first transition surface and said lower surface.

18. The distractor of claim 12, wherein said upper surface includes a proximal portion and a distal portion and said lower surface includes a proximal portion and a distal portion, said proximal portions being generally parallel with one another and said distal portions tapering toward one another from said proximal portions toward said distal end surface.

19 The distractor of claim 12, wherein said first curvature is defined by a radius of curvature of 9 millimeters.

20. A surgical instrument assembly for distracting a spinal disc space, comprising:

- a first shaft extending between a proximal end and a distal end;
  - a first distractor tip extending from the distal end of said first shaft, said first distractor tip including opposite first and second surfaces defining a first distraction height;
- a second distractor including:
  - a second shaft extending between a proximal end and a distal end;
  - a second distractor tip extending from the distal end of said second shaft, said second distractor tip including opposite first and second surfaces defining a second distraction height substantially equal to said first distraction height;
- a guide sleeve defining a working channel extending between a proximal end and a distal end, wherein said first and second distractors are received in said working channel of said guide sleeve; and
- a distractor driver cap coupled to the proximal end of said first and second distractors and said guide sleeve, said distractor driver cap having a side opening wherein said distractor driver cap is side-loaded onto said first and second distractors and said guide sleeve.

21. The assembly of claim 20, wherein said second distractor includes a recessed area extending along a medial side thereof.

22. The assembly of claim 21, wherein said recessed area is a concave  
5 surface.

23. The assembly of claim 21, wherein said recessed area is configured to permit rotation of a surgical instrument positioned adjacent thereto.

10 24. The assembly of claim 20, wherein said first distractor tip is integrally formed with said first shaft and said second distractor tip is integrally formed with said second shaft.

25. The assembly of claim 20, wherein:  
15 said first distractor includes a convex surface along said medial side thereof;  
and  
said second distractor includes a convex surface along said medial side thereof.

26. The assembly of claim 20, wherein a distal end of said guide sleeve  
20 includes a pair of opposite flanges extending distally therefrom.

27. The assembly of claim 20, wherein said working channel includes a first working channel portion for receiving said first distractor and a second working channel portion for receiving said second distractor.

25 28. The assembly of claim 27, wherein said first working channel portion and said second working channel portion form a figure eight shape.

29. The assembly of claim 20, wherein said guide sleeve includes a sleeve cap at said proximal end of said guide sleeve, said sleeve cap including a proximal end ring engageable to said distractor driver cap.

5 30. The assembly of claim 29, wherein said first distractor includes a first flange on its proximal end defining a lip therearound and said second distractor includes a second flange on its proximal end defining a lip therearound, said driver cap including a distractor slot slidably receiving said first and second flanges therein.

10 31. The assembly of claim 30, wherein said distractor driver cap includes a guide sleeve slot slidably receiving said proximal end ring.

32. The assembly of claim 20, wherein said first distractor includes a first flange on its proximal end defining a lip therearound and said second distractor  
15 includes a second flange on its proximal end defining a lip therearound, said driver cap including a distractor slot slidably receiving said first and second flanges therein.

33. The assembly of claim 32, wherein said first flange includes a proximal face having a hole therein and said second flange includes a proximal face having a  
20 hole therein, said distractor driver cap including a spring-biased plunger positionable in a corresponding one of said holes when said distractor driver cap is properly positioned thereon.

34. The assembly of claim 20, wherein:  
25 said first distractor includes a projection extending from a medial side of said first shaft;

said second distractor includes a notch formed in a medial side of said second shaft, wherein when said first and second distractors are positioned in said guide

sleeve said projection is received in said notch to prevent relative movement between said first and second distractors.

5        35.     The assembly of claim 34, wherein in said projection is cylindrically shaped.

      36.     The assembly of claim 20, wherein each of said first and second distractor tips includes:

      a distal surface;  
10       a lateral surface;  
      a first transition surface extending between said distal end surface and said lateral surface, said first transition surface having a first curvature generally corresponding to the curvature of the inner portion of the cortical rim of the vertebral endplates in the axial plane.

15       37.     The assembly of claim 36, wherein each of said first and second distractor tips further includes a second upper transition surface extending between said lateral surface and said upper surface and a second lower transition surface extending between said lateral surface and said lower surface, said second upper and  
20       lower transition surfaces each having a second curvature generally corresponding to the curvature of the inner portion of the cortical rim of the vertebral endplates in the coronal plane.

      38.     The assembly of claim 37, wherein each of said first and second  
25       distractor tips further includes a third upper transition surface extending between said distal end surface and said upper surface and a third lower transition surface extending between said distal end surface and said lower surface, said third upper and lower transition surfaces each having a third curvature generally corresponding to the



Atty Docket No. 4002-3501/PC361.18

curvature of the inner portion of the cortical rim of the vertebral endplates in the sagittal plane.